

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): An ac generator for a vehicle comprising:

a rotor having field windings,

a stator including a stator core arranged opposed to the rotor and an electrical conductor wound on the stator core, and

a housing supporting the rotor and the stator, wherein the stator core is constituted by laminated core having a plurality of slots each extending to an axial direction, the electrical conductor is comprised of a slot-in portion located in the slots and a cross-over portion connecting each of the slot-in portions at the shaft end side of the stator, wherein the conductor is formed so that ~~of~~ the slot-in portion located in the slots is molded to substantially rectangular in its cross-sectional profile before it is entered in the slots ~~and the conductor of~~ the cross-over portion is substantially circular in its cross-sectional profile, and at least longer side portion of the conductor of the slot-in portion located in the slots has an insulation coating of which thickness is smaller than that of insulation coating in the cross-over portion,

~~wherein the cross-over portion comprises at least one gap between the insulation coating of adjacent elements of the conductor.~~

2. (original): An ac generator for a vehicle of claim 1, wherein a conductor of the slot-in portion located in the slots is a substantially rectangular in cross section a shorter side

thereof being in the radial direction of the generator and a longer side thereof being in the circumferential direction of the generator.

3. (original): An ac generator for a vehicle of claim 1, wherein a conductor of the slot-in portion located in the slots is a substantially rectangular in cross section a shorter side thereof being in the circumferential direction of the generator and a longer side thereof being in the radial direction of the generator.

4. (original): An ac generator for a vehicle of claim 2, wherein a conductor of the slot-in portion located in the slots is closely disposed on a line to the radial direction.

5. (original): An ac generator for a vehicle of claim 2, wherein a conductor of the slot-in portion located in the slot is closely disposed on plural lines to the radial direction.

6. (original): An ac generator for a vehicle of claim 1, wherein a conductor of the slot-in portion located in the slot is impregnated with insulating resins.

7. (original): An ac generator for a vehicle of claim 1, wherein the periphery of the cross-over portion is protected by the housing and the laminated core is directly held by the housing made of metal.

8. (original): An ac generator for a vehicle of claim 7, wherein the periphery of the housing is provided with a plurality of ribs and charging air holes or discharging air holes formed between the ribs.

9. (previously presented): An ac generator for a vehicle of claim 1, wherein a cross-section of the slot-in portion is smaller than a cross-section of the cross-over portion.

10. (previously presented): An ac generator for a vehicle of claim 6, wherein the insulation coating in the slot-in portion and the insulation coating in the cross-over section are made of the same material.

11. (currently amended): An ac generator for a vehicle comprising:
a rotor having field windings,
a stator including a stator core arranged opposed to the rotor and an electrical conductor wound on the stator core, and
a housing supporting the rotor and the stator,
wherein:

the stator core is constituted by laminated core having a plurality of slots each extending to an axial direction,

the electrical conductor is comprised of a slot-in portion located in the slots and a cross-over portion connecting each of the slot-in portions at the shaft end side of the stator,

the conductor of the slot-in portion located in the slots is substantially rectangular in its cross-sectional profile and the conductor of the cross-over portion is substantially circular in its cross-sectional profile,

the slot-in portion comprises at least one coil element in each of the plurality of slots,

the cross-over portion comprises ends of the at least one coil element elements, the ends of the at least one coil element elements connect the coil element of the slot-in portion portions in adjacent slots among the plurality of slots,

distances between adjacent, parallel the ends of the at least one coil element elements in the cross-over portion are different, and

said at least longer side portion of the conductor of the slot-in portion located in the slots has an insulation coating of which thickness is smaller than that of insulation coating of each of the ends of coil elements in the cross-over portion.

12. (new): The ac generator for a vehicle of claim 1, wherein the cross-over portion comprises a gap between the insulation coating of each adjacent element of the conductor.

13. (new): The ac generator for a vehicle of claim 1, wherein the insulation coated electrical conductor has a diameter of 1.6 mm for the cross-over portion, and

the insulation coated electrical conductor is flattened into one direction to a thickness of 1.3 mm for the slot-in portion.

14. (new): The ac generator for a vehicle of claim 1, wherein the thickness of the insulation coating of the cross-over portion is 50 μm , and

the thickness of the insulation coating of the slot-in portion is 40 μm .